

RV GENERATORS

Protect against fuel varnishing

If you don't run a tank of gas a month, you could be risking the performance of your RV generator.

If you store your RV over the winter, or don't operate it often enough to refuel the gas tank every month, you could develop a fuel varnishing problem in your engine — particularly in your generator.

Fuel varnishing is a gummy residue that clogs the generator carburetor and fuel pump. It's caused by the deterioration of fuel, and it happens in a surprisingly short period of time.

Depending on fuel quality and storage conditions, gasoline can deteriorate in as little as 30 days. As long as you refuel frequently with fresh gasoline, and exercise the unit regularly, fuel varnishing is less likely to occur. But if you leave the same gasoline in the tank for several months, you're very likely to have problems if precautionary steps are not taken.

Fuel varnishing affects many engines, but it's more noticeable in generators because the engines are smaller. Even the slightest decrease in efficiency has a big impact on performance. A generator with varnish buildup may start, but runs like it needs a tune-up. It surges, accelerating and decelerating, but never settling on a stable operating speed.

In many of the gasoline powered units, engine speed directly affects generator voltage output and frequency. As speed increases/decreases, so does the voltage and frequency. The only ways to prevent fuel varnishing are to treat the contents of the tank supplying fuel to the generator with a fuel preservative and to exercise the set. Cummins Power Generation has developed a fuel preservative and stabilizer, OnaFresh; specifically formulated for Cummins Onan generators. Cummins Power Generation recommends adding this preservative to the fuel, especially on infrequently used coaches.

Emptying the tank won't prevent fuel varnishing because a small amount of fuel always remains in the carburetor. If you plan to leave the tank empty, Cummins Power Generation recommends that you add a special



mixture of fuel and a preservative before you run the tank dry so the residual fuel contains the preservative. Additionally, we recommend that you drain the carburetor float bowl to further reduce the residual fuel left in the system.

If you plan to leave fuel in the tank, be sure to add preservative to the fuel and run the generator under load for 30 minutes plus 2 minutes for every foot of fuel line from the fuel tank to the generator. This will ensure that the entire fuel system is properly treated. Onagard Storage Fogging Spray can then be used to further protect the generator while not in use.

Problems caused by fuel varnishing will not be covered under Cummins Onan product warranty guidelines.

Once varnishing has occurred, adding a preservative won't correct the problem. The only solution allowed by EPA is to replace the entire carburetor.

By understanding how to properly care for your RV generator and protect against fuel varnishing, you'll enjoy better performance and longer service-free operation. It may seem strange that "not" using a product causes it to break down faster. With generators, though, that's exactly the case.

OnaFresh, along with other Green Label Parts maintenance products can be found at your local Cummins Onan Certified RV Service and Parts Dealer. To locate your nearest dealer, visit www.cumminsonan.com/locator.

For dependable performance and to maximize the life of your RV Generator.

**Use Green Label Parts™.
Genuine Cummins Onan.**



Cummins Power Generation offers a complete line of accessories, replacement and tune-up parts, oil and maintenance chemicals specifically designed for RV generators. Look for Green Label Parts at your local Cummins Onan Certified RV Service and Parts Dealer located throughout the United States and Canada. To locate your nearest dealer, visit www.cumminsonan.com/locator.

Oil and Service/Maintenance Chemicals

OnaMax™ 15W40 Oil (#326-5336) SAE 30 (#326-5339)

Factory recommended and tested, maximum protection engine oil formulated to reduce consumption and engine wear due to high temperature oil oxidation and viscosity increase. 1-qt. bottle.

OnaFresh™ GXLP Fuel Stabilizer (#326-5365)

A premium fuel additive, specially formulated for long-lasting prevention of gasoline breakdown during extended RV storage. Protects gasoline against gum, varnish and sludge formation as well as fuel system corrosion. 16-oz. bottle treats 40 gallons of gasoline.

Onagard Storage Fogging Spray (#326-5288)

Protects small engines and other mechanical equipment during off-season storage. Provides protection for up to six months. 12-oz. aerosol can.

Cummins Onan



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Limited Warranty

RV Generator Sets

This limited warranty applies to all Cummins Onan® branded RV generating sets and associated accessories (hereinafter referred to as "Product").

This warranty covers any failures of the Product, under normal use and service, which result from a defect in material or factory workmanship.

Warranty Period:

CPG warrants for the periods set forth below that any product or product component that fails due to a defect in CPG material or workmanship will be repaired or replaced at CPG's option, provided such products are installed, operated, and maintained in accordance with CPG written instructions for generators used in recreational vehicles.

The warranty start date is the date of sale of Product to the first retail purchaser. The coverage duration is 3 years from warranty start date or 2,000 hours, whichever occurs first.

For RV generators used in non Recreational Vehicle applications**, the warranty coverage duration is 1 year from warranty start date or 1,000 hours, whichever occurs first:

1 Year, 1000 hours

- Parts and labor required to repair the Product.
- Maintenance items that are contaminated or damaged by a warrantable failure.

Generator sets used for demonstration purposes, coverage commences at one hundred (100) hours or from the date of sale to the first retail purchaser, whichever comes first.

Replacement parts installed as a part of a warranty repair assumes the remainder of the products warranty period. This includes complete product replacement under warranty.

Warranty coverage is transferable to subsequent owners.

**Recreational Vehicle is defined as having all of the following amenities

- Sleeping quarters
- Kitchen
- Bathroom facilities

Pop-up tent campers are considered RV applications

Cummins Power Generation® Responsibilities:

In the event of a failure of the Product during the warranty period due to defects in material or workmanship, Cummins Power Generation® will only be responsible for the following costs:

Years 1 & 2

- Parts and labor required to repair the Product.
- Maintenance items that are contaminated or damaged by a warrantable failure.

Year 3

- Parts and labor required to repair the Major components of the Product only¹.
- Maintenance items that are contaminated or damaged by a warrantable failure of a Major component¹.

¹Major components for power train included: cylinder block, cylinder heads, crankshaft, camshaft, balance shafts, pistons, rings, valves, valve lifters, manifolds, and major castings

¹Major components for generator included: main stator, main rotor, and generator controller-inverter.

¹Major components for electronic included: inverter, transfer switch and display panel.

Owner Responsibilities:

The owner will be responsible for the following:

- Providing evidence of the date of sale to the first retail purchaser.
- Notifying Cummins Power Generation® distributor or dealer within 30 days of the discovery of failure.
- Operating and maintaining the Product in accordance with Cummins Power Generation®'s published policies and guidelines.

- Providing sufficient access to and reasonable ability to remove the Product from the installation in the event of a warrantable failure.

In addition, the owner will be responsible for:

- Incremental costs and expenses associated with Product removal and reinstallation resulting from non-standard installations.
- Costs associated with rental of generator sets used to replace the Product while the Product is being repaired.
- Costs associated with labor overtime, travel time, mileage and premium shipping requested by the owner.
- All downtime expenses, fines, all applicable taxes, and other losses resulting from a warrantable failure.
- Living and travel expenses.
- Telephone or other communication expenses.

Limitations:

This limited warranty does not cover Product failures resulting from:

- Inappropriate use relative to designated power rating.
- Inappropriate use relative to application and installation guidelines.
- Normal wear, rust, corrosion and varnished fuel system components.
- Owner or operator's negligence, accidents or misuse.
- Lack of, late or improper maintenance practices or improper repair.
- Use of improper or contaminated fuels, coolants or lubricants.
- Operation without adequate coolant or lubricants.
- Owner's delay in making Product available after notification of potential Product problem.
- Use of add-on, modified or replacement parts and accessories not authorized by Cummins Power Generation®.
- Noncompliance with any Cummins Power Generation® published guideline or policy.
- Improper storage, starting, and break-in practices.
- Damage to parts, fixtures, housings, attachments and accessory items that are not part of the generator set.

This limited warranty does not cover costs resulting from:

- Difficulty in gaining access to the Product.
- Damage to customer property.
- Cosmetic damage to enclosures.

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CUMMINS POWER GENERATION® RIGHT TO FAILED COMPONENTS:

Failed components claimed under warranty remain the property of Cummins Power Generation®. Cummins Power Generation® has the right to reclaim any failed component that has been replaced under warranty.

THIS IS THE SOLE WARRANTY MADE BY CUMMINS POWER GENERATION® IN REGARD TO THE PRODUCT. CUMMINS POWER GENERATION® MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OR OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT IS CUMMINS POWER GENERATION® LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

This limited warranty shall be enforced to the maximum extent permitted by applicable law. This limited warranty gives the owner specific rights that may vary from state to state or from jurisdiction to jurisdiction.

Product Model Number: _____

Product Serial Number: _____

Date in Service: _____

Cummins Power Generation® Federal Emissions Control

GENERAL EMISSIONS WARRANTY COVERAGE

Cummins Power Generation warrants to the ultimate purchaser and each subsequent purchaser that the new equipment is:

Designed, built, and equipped so as to conform with all applicable regulations; and free from defects in materials and workmanship that cause the failure of a warranted part to be identical in all material respects to that part as described in Cummins Power Generation application for certification.

The warranty period begins on the date the new equipment is delivered to an ultimate purchaser or first placed into service. The warranty period is two years.

Subject to certain conditions and exclusions as stated below, the warranty on emission-related parts is as follows:

- (1) Any warranted part that is not scheduled for replacement as required maintenance in the written instructions supplied, is warranted for the warranty period stated above. If the part fails during the period of warranty coverage, the part will be repaired or replaced by Cummins Power Generation according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.
- (2) Any warranted part that is scheduled only for regular inspection in the written instructions supplied is warranted for the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.

- (3) Any warranted part that is scheduled for replacement as required maintenance in the written instructions supplied is warranted for the period of time before the first scheduled replacement date for that part. If the part fails before the first scheduled replacement, the part will be repaired or replaced by Cummins Power Generation according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.
- (4) Repair or replacement of any warranted part under the warranty provisions herein must be performed at a warranty station at no charge to the owner.
- (5) Notwithstanding the provision herein, warranty services or repairs will be provided at all of our distribution centers that are authorized to service the subject engines or equipment.
- (6) The new equipment owner will not be charged for diagnostic labor that is directly associated with diagnosis of a defective, emission-related warranted part, provided that such diagnostic work is performed at a warranty station.
- (7) Cummins Power Generation is liable for damages to other engine or equipment components proximately caused by a failure under warranty of any warranted part.
- (8) Throughout the new equipment warranty period stated above, Cummins Power Generation will maintain a supply of warranted parts sufficient to meet the expected demand for such parts.

- (9) Any replacement part may be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of Cummins Power Generation.
- (10) Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts by the ultimate purchaser will be grounds for disallowing a warranty claim. Cummins Power Generation will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified parts.

WARRANTED PARTS:

The repair or replacement of any warranted part otherwise eligible for warranty coverage may be excluded from such warranty coverage if Cummins Power Generation demonstrates that the (new equipment) has been abused, neglected, or improperly maintained, and that such abuse, neglect, or improper maintenance was the direct cause of the need for repair or replacement of the part. That notwithstanding, any adjustment of a component that has a factory installed, and properly operating, adjustment limiting device is still eligible for warranty coverage. The following emission warranty parts list is included new equipment:

- (1) Fuel Line
- (2) Fuel Line Fittings
- (3) Clamps
- (4) Control Valves
- (5) Purge Valves
- (6) Vapor Hoses
- (7) Carbon Canister
- (8) Canister Mounting Brackets
- (9) Carburetor Purge Port Tube
- (10) Metal Fuel Tank
- (11) Fuel Tank Cap
- (12) Carburetor or Fuel Injection System and Pressure Regulator
- (13) Mixer and Regulator System
- (14) Electronic Ignition System
- (15) Air Filter

Warranted Parts Continued...

- (16) Spark Plugs
- (17) Air Injection System
- (18) Catalyst Muffler
- (19) Miscellaneous Belts, Hoses and Connectors used in the above assemblies.

This is the exclusive warranty on covered parts. There are no other warranties, express or implied, including no warranties of merchantability and fitness for a particular purpose.

If you have any questions regarding your warranty rights and responsibilities, you should contact your Cummins Onan distributor by calling 1-800-888-6626.

Cummins Onan

Performance you rely on.™



CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board and Cummins Power Generation are pleased to explain the emissions control system warranty on your Model Year 2014 small off-road engine (SORE) installed in your generator set. In California, new SORE must be designed, built and equipped to meet the State's stringent anti-smog standards. Cummins Power Generation must warrant the ECS on your SORE for the period of time listed below provided there has been no abuse, neglect or improper maintenance of your SORE.

Your Emissions Control System may include parts such as the carburetor, fuel-injection system, the ignition system, catalytic converter, fuel tanks, fuel lines, fuel caps, valves, canisters, filters, vapor hoses, clamps, connectors, and other associated emission-related components.

Where a warrantable condition exists, Cummins Power Generation will repair your Model Year 2014 SORE at no cost to you (End User) including diagnosis, parts and labor.

MANUFACTURER'S WARRANTY COVERAGE:

This emissions control system is warranted for two years. If any emission-related part on your equipment is defective, the part will be repaired or replaced by Cummins Power Generation.

OWNER'S WARRANTY RESPONSIBILITIES:

As the SORE owner, you are responsible for performance of the required maintenance listed in your owner's manual. Cummins Power Generation recommends that you retain all receipts covering maintenance on your SORE, but Cummins Power Generation cannot deny warranty solely for the lack of receipts.

As the SORE owner, you should however be aware that Cummins Power Generation may deny you warranty coverage if your SORE or a part has failed due to abuse, neglect, or improper maintenance or unapproved modifications.

You are responsible for presenting your SORE to Cummins Power Generation's distribution center or service center as soon as the problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have a question regarding your warranty coverage, you should contact Cummins Onan distributor by calling
1-800-888-6626

DEFECTS WARRANTY REQUIREMENTS:

The warranty period begins on the date the engine or equipment is delivered to an ultimate purchaser.

GENERAL EMISSIONS WARRANTY COVERAGE:

Cummins Power Generation warrants to the ultimate purchaser and each subsequent purchaser that the new equipment is:

Designed, built, and equipped so as to conform with all applicable regulations; and free from defects in materials and workmanship that cause the failure of a warranted part to be identical in all material respects to that part as described in Cummins Power Generation application for certification.

The warranty period begins on the date the new equipment is delivered to an ultimate purchaser or first placed into service. The warranty period is two years.

The warranty on emission related parts will be interpreted as follows:

- (1) Any warranted part that is not scheduled for replacement as required maintenance in the written instructions supplied, is warranted for the warranty period stated above. If the part fails during the period of warranty coverage, the part will be repaired or replaced by Cummins Power Generation according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.
- (2) Any warranted part that is scheduled only for regular inspection in the written instructions supplied is warranted for the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.
- (3) Any warranted part that is scheduled for replacement as required maintenance in the written instructions supplied is warranted for the period of time before the first scheduled replacement date for that part. If the part fails before the first scheduled replacement, the part will be repaired or replaced by Cummins Power Generation according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first

scheduled replacement point for the part.

- (4) Repair or replacement of any warranted part under the warranty provisions herein must be performed at a warranty station at no charge to the owner.
- (5) Notwithstanding the provision herein, warranty services or repairs will be provided at all of our distribution centers that are authorized to service the subject engines or equipment.
- (6) The new equipment owner will not be charged for diagnostic labor that is directly associated with diagnosis of a defective, emission-related warranted part, provided that such diagnostic work is performed at a warranty station.
- (7) Cummins Power Generation is liable for damages to other engine or equipment components proximately caused by a failure under warranty of any warranted part.
- (8) Throughout the new equipment warranty period stated above, Cummins Power Generation will maintain a supply of warranted parts sufficient to meet the expected demand for such parts.
- (8) Any replacement part may be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of Cummins Power Generation.
- (10) Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts by the ultimate purchaser will be grounds for disallowing a warranty claim. Cummins Power Generation will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified parts.

- (11) The manufacturer issuing the warranty shall provide any documents that describe that manufacturer's warranty procedures or policies within five working days of request by the Air Resources Board.

This is the exclusive warranty on covered parts. There are no other warranties, express or implied, including no warranties of merchantability and fitness for a particular purpose.

WARRANTED PARTS:

The repair or replacement of any warranted part otherwise eligible for warranty coverage may be excluded from such warranty coverage if Cummins Power Generation demonstrates that the (new equipment) has been abused, neglected, or improperly maintained, and that such abuse, neglect, or improper maintenance was the direct cause of the need for repair or replacement of the part. That notwithstanding, any adjustment of a component that has a factory installed, and properly operating, adjustment limiting device is still eligible for warranty coverage. The following emission warranty parts list is included new equipment:

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- (9) Carburetor Purge Port Tube
- (10) Metal Fuel Tank
- (11) Fuel Tank Cap
- (12) Carburetor or fuel injection system and fuel pressure regulator
- (13) Mixer and regulator system
- (14) Electronic Ignition System
- (15) Air Filter
- (16) Spark Plugs
- (17) Air Injection System
- (18) Catalyst Muffler
- (19) Miscellaneous Belts, Hoses and Connectors used in the above assemblies.